P2 in Labs: A Case Study
Molly's P2 Challenge

Molly Redbud has been tasked with reducing waste in her three laboratories. She knows that pollution prevention is the preferred approach to environmental management at Aberdeen Proving Ground, but unfortunately has never attended a Directorate of Safety, Health and Environment (DSHE) pollution prevention class. You, as a newly trained pollution prevention specialist, have been assigned to assist her on this project.

During your first meeting Molly takes you on a tour of her hazardous material storage areas. During this tour you find that:

1. Each lab stores its own hazardous materials in flam lockers.
2. The MSDS binder is readily available and appears to be complete and current.
3. Two of the labs have expired products.
4. All of the products have HITS barcodes.
5. There are some products that all three labs stock.

During your second meeting Molly takes you to meet the individual lab managers. During these interviews you discover that:

1. Laboratory 1 tests experimental products from private companies and often receives more of the test product than is needed.
2. Laboratory 1 employs the use of an automatic pipetting machine.
3. Laboratory 2 uses a chromic acid solution to clean its glassware.
4. Laboratory 2 writes pollution prevention techniques into many test protocols.
5. Laboratory 3 maintains a large inventory of film developing chemicals from which they recover silver.
6. None of the lab managers have a Hazardous Inventory Tracking System (HITS) account.
7. Laboratory 1 has a large cylinder storage area that is no longer serviced, but still has both empty and full cylinders.

During your third meeting, Molly reviews her SOPs with you. You find that:

1. The SOPs are eight years old.
2. The equipment is even older (types of equipment in stock: thermometers, paint guns, parts washers, etc.)
3. There is no one designated to review hazardous product purchases (types of materials purchased: solvents, paints, chemicals, etc).
4. Before unused chemical products expire, and are disposed of, some lab managers ask their colleagues if they have a use for them.
5. Substrates and other materials are cleaned using a dipping process into a hazardous material multiple times a day, using a new container each time.
6. Where possible, lab testing protocols require that tests be conducted in microscale measures.

Where are the labs preventing pollution?
Is there room for improvement?
What can Molly do to help APG labs prevent more pollution?